

Typical C-band link budgets

Emission designator	36M0G7W	6M95G1W	36M0G7W	36M0G7W	100KG1W	1M35G1W
No.of phases	4	4	8	16	4	4
Carriers/xpndr	1	5	1	1	360	26
Carrier spacing(KHz)		6950			100	1350
Bandwidth(allocated), MHz	36	6.95	36	36	0.1	1.35
Throughput(Mbps)	40	8	60	110	0.056	1.544
FEC rate	0.691	0.691	0.614	0.806	0.691	0.691
TxES pwr(W)	1000	50	1000	1000	10	50
TxES pwr(dBW)	30.0	17.0	30.0	30.0	10.0	17.0
Antenna feed loss(dB)	-1	-1	-1	-1	-1	-1
TxES antenna dia (m)	10	5	10	10	5	5
Antenna gain(dBi)	53.7	47.3	53.7	53.7	47.3	47.3
TxES EIRP(dBW)	83.7	64.3	83.7	83.7	57.3	64.3
Uplink rain loss(dB)	0	0	0	0	0	0
UL free space loss(dB)	-200.1	-200.1	-200.1	-200.1	-200.1	-200.1
Satellite G/T(dB/K)	-4	-4	-4	-4	-4	-4
C/N(UL, thermal), dB	31.6	19.4	31.6	31.6	30.8	26.5
C/I, UL(dB)	25	20	25	25	20	20
C/(N+I), UL(dB)	24.1	16.7	24.1	24.1	19.7	19.1
Satellite EIRP, peak(dBW)	34	34	34	34	34	34
Carrier EIRP(dBW)	34.0	23.0	34.0	34.0	4.4	15.9
DL free space loss(dB)	-196.3	-196.3	-196.3	-196.3	-196.3	-196.3
DL rainloss(dB)	0	0	0	0	0	0
RxES dia(m)	5	5	5	10	5	5
RxES gain(dBi)	47.5	47.5	47.5	53.5	47.5	47.5
RxES G/T(dB/K)	23	23	23	29.0	23	23
C/N(DL, thermal), dB	13.7	9.9	13.7	19.7	9.7	9.8
C/I, DL(dB)	19	19	19	24	19	19
C/(N+I), DL(dB)	12.6	9.4	12.6	18.4	9.3	9.3
C/(N+I), total(dB)	12.3	8.6	12.3	17.3	8.9	8.9
C/N required(dB)	6.8	6.8	9.9	16.2	6.8	6.8
Margin (dB)	5.5	1.8	2.4	1.1	2.1	2.1

TV/FM

1

36

450

26.5

-1

10

53.7

80.2

0

-200.1

-4

28.2

25

23.3

34

34.0

-196.3

0

5

47.5

23

13.7

19

12.6

12.2

12

0.2